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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,425	11/30/2000	Mathew S. Read	029419.0015.UTL	4391

7590

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EXAMINER

THAI, LUAN C

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 09/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/727,425

Applicant(s)

READ ET AL.

Examiner

Luan Thai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

This Office action is responsive to the amendment filed July 19, 2002.

Claims **1-10** are pending in this application.

Claims **11-16** have been withdrawn from consideration as being directed to a non-elected invention.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward et al. (6,124,546).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 1-6, Hayward et al. disclose (specifically see figures 4-5) a micro-leadframe package 62 comprising a flat base 2 having conductive lead pattern 26-28 formed thereon to provide electrically conductive paths for an integrated circuit package 14, which inherently comprises a semiconductor die therein, wherein the semiconductor die 14 electrically connected to the lead fingers of the lead patterns 26-28 via solder balls 52-54 (also known as flip-chip connections); a plurality of preload extension tabs 22-24 protruded at an angle

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with respect to the flat base 2 into the integrated circuit package 14 to a predetermined height above the flat base; a mold cap 16 having a predetermined height above the flat base. Hayward et al do not teach the conductive lead patterns being formed by etching.

Note that "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is ... obvious from a product of the prior art, the claim is unpatentable ..." In re Thorpe, 227 U.S.P.Q. 964 (Fed. Cir. 1985). (MPEP 2113).

3. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward et al. (6,124,546) in view of Glenn (6,143,981 of record).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 7-10, Hayward et al. disclose all the limitations of the claimed invention as detailed above except for teaching the mold cap 16 comprising plastic. Plastic, however, is a well-known material in semiconductor art for encapsulating or molding a semiconductor device as taught by Glenn (Col. 1, lines 11-12, 19-23, 25-26, and 57+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use plastic to form the mold cap for Hayward et al.'s device package since it has been held to be within the general skill of a worker in the art to select a known material on the

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basis of its suitability for the intended use as a matter of obvious design choice.

*In re Leshin*, 125 USPQ 416.

4. Claims 1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Variot (6,124,546).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 1-3 and 5-10, Variot discloses (specifically see figures 3-4) a micro-leadframe package comprising a flat base 128 having conductive lead pattern 102-108 formed thereon to provide electrically conductive paths for an integrated circuit package 202, which inherently comprises a semiconductor die therein, wherein the semiconductor die 202 electrically connected to the lead fingers of the lead patterns 102-108 via wirings 216a-216b; a plurality of preload extension tabs 120-124 protruded at an angle with respect to the flat base 2 into the integrated circuit package 14 to a predetermined height above the flat base; a plastic mold cap 300 having a predetermined height above the flat base. Variot does not teach the conductive lead patterns 102-108 being formed by etching.

Note that "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is ... obvious from a product of the prior art, the claim is unpatentable ..." *In re Thorpe*, 227 U.S.P.Q. 964 (Fed. Cir. 1985). (MPEP 2113).

***Conclusion***

5. Applicant's arguments with respect to claims **1-10** have been fully considered, but they are deemed to be moot in view of the new grounds of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action because the newly added limitation of "etched on the flat base" in independent claims 1 and 6 raise new issues that would require further consideration and/or search. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan Thai whose telephone number is (703) 308-1211. The examiner can normally be reached on 7:00 AM - 4:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (703) 305-9883. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Luan Thai  
September 6, 2002

 9-9-02  
ALBERT W. PALADINI  
PRIMARY EXAMINER